REMARKS

In the Office Action, the Examiner noted that claims 1-32 are pending in the application and that claims 1-32 stand rejected. By this response, claims 16 and 32 are cancelled. All other claims continue unamended.

In view of the following discussion, the Applicant respectfully submits that none of these claims now pending in the application are anticipated under the provisions of 35 U.S.C. § 102. In addition, in view of the following discussion and the terminal disclaimer submitted herewith, the Applicant respectfully submits that none of these claims are subject to a non-statutory Double Patenting rejection. Thus the Applicant believes that all of these claims are now in allowable form.

Rejections

Double Patenting

A. Judicially created obviousness type double patenting

The Examiner rejected claims 1-32 under the Judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1, 3-11, 21, 23-31, and 34-39 of copending application No. 10/197,233. The Examiner stated that the claims are not identical, but they are not patentably distinct from each other.

The Applicant respectfully disagrees and believes that each application is unobvious in view of the other, however, to further the prosecution of the present case, the Applicant is submitting herewith a timely filed terminal disclaimer in compliance with 37 CFR 1.321(c). Having done so, the Applicant submits that the basis for the Examiner's rejection of the Applicant's claims under the Judicially created doctrine of obviousness type double patenting has been removed. As such, the Applicant respectfully requests that the Examiner's rejection of the Applicant's claims 1-32 be withdrawn.

B. Judicially created obviousness type double patenting

The Examiner rejected claims 1-5 and 17-21 under the Judicially created doctrine of obviousness type double patenting as being unpatentable over claims 14-18 and 33-37 of copending application No. 10/493,347. The Examiner stated

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that the claims are not identical, but they are not patentably distinct from each
other.

The Applicant respectfully disagrees and believes that each application is
unobvious in view of the other, however, to further the prosecution of the present
case, the Applicant is submitting herewith a timely filed terminal disclaimer in
compliance with 37 CFR 1.321(c). Having done so, the Applicant submits that the
basis for the Examiner's rejection of the Applicant's claims under the Judicially
created doctrine of obviousness type double patenting has been removed. As
such, the Applicant respectfully requests that the Examiner's rejection of the
Applicant's claims 1-32 be withdrawn.

C. Judicially created obviousness type double patenting

The Examiner rejected claims 1-3, 11, 17-19 and 25 under the Judicially
created doctrine of obviousness type double patenting as being unpatentable over
claims 19-21, 1, 40-42, and 35, respectively, of copending application No.
10/164,874. The Examiner stated that the claims are not identical, but they are not
patentably distinct from each other.

The Applicant respectfully disagrees and believes that each application is
unobvious in view of the other, however, to further the prosecution of the present
case, the Applicant is submitting herewith a timely filed terminal disclaimer in
compliance with 37 CFR 1.321(c). Having done so, the Applicant submits that the
basis for the Examiner's rejection of the Applicant's claims under the Judicially
created doctrine of obviousness type double patenting has been removed. As
such, the Applicant respectfully requests that the Examiner's rejection of the
Applicant's claims 1-32 be withdrawn.

D. Judicially created obviousness type double patenting

The Examiner rejected claims 1-2 and 6-9 under the Judicially created
doctrine of obviousness type double patenting as being unpatentable over claims
1, 7, and 9-11 of copending application No. 10/205,192. The Examiner stated that
the claims are not identical, but they are not patentably distinct from each other.

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The Applicant respectfully disagrees and believes that each application is unobvious in view of the other, however, to further the prosecution of the present case, the Applicant is submitting herewith a timely filed terminal disclaimer in compliance with 37 CFR 1.321(c). Having done so, the Applicant submits that the basis for the Examiner's rejection of the Applicant's claims under the Judicially created doctrine of obviousness type double patenting has been removed. As such, the Applicant respectfully requests that the Examiner's rejection of the Applicant's claims 1-32 be withdrawn.

E. 35 U.S.C. § 102

The Examiner rejected claims 1, 3-4, 6-9 11-13, 15-17, 19-20, 22-25, 27-29, 31 and 32 under 35 U.S.C. § 102(e) as being anticipated by Mercier (U.S. Patent 6,865,747). The rejection is respectfully traversed.

The Examiner alleges that Mercier discloses a video reproduction apparatus that shows all of the limitations of the Applicant's invention. The Applicant respectfully disagrees.

Claim 1

"Anticipation requires the presence in a single prior art reference disclosure of <u>each and every element of the claimed invention, arranged</u> as in the claim" (<u>Lindemann Maschinenfabrik GmbH v. American Hoist & Derrik Co.</u>, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)) (emphasis added).

The Applicant respectfully submits that the Mercier reference fails to teach, suggest or anticipate each and every element of at least the invention as recited in the Applicant's claim 1, which specifically recites:

> "A method of performing a trick mode on a video signal containing a plurality of progressively scanned original pictures, comprising the steps of:
> in response to a trick mode command, **selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal; and**
> selectively inserting at least one dummy predictive picture in the trick mode video signal." (emphasis added).

The Applicant's invention is directed at least in part to a method of performing a trick mode on a video signal containing a plurality of progressively scanned original pictures including at least selectively repeating at least one of the

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original pictures to convert the video signal to a trick mode video signal in response to a trick mode command. More specifically, in support of at least claim 1, the Applicant in the Specification specifically recites:

> "The method includes the steps of: in response to a trick mode command, selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal; and selectively inserting at least one dummy predictive picture in the trick mode video signal." (See Applicant's Specification, page 3, lines 3-7).

And

> "At step 212, a trick mode command can be received. For purposes of the invention, the trick mode command can be any command in which one or more of the original pictures are to be repeated including a pause or freeze command or a slow motion command. As shown at decision block 213, it can be determined whether at least one of the original pictures is to be repeated. If so, then at least one of the original pictures can be selectively repeated, as shown at step 214. This selective repetition converts the video signal to a trick mode video signal." (See Applicant's Specification, page 10, lines 6-13).

It is clear from at least the portions of the Applicant's disclosure presented above that the Applicant's invention is directed, at least in part, to a method, apparatus and systems for performing a trick mode on a video signal containing a plurality of progressively scanned original pictures including selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal such as a pause or freeze command or a slow motion command.

The Applicant respectfully submits that Mercier fails to teach, suggest, disclose or anticipate each and every element of the claimed invention, arranged as in at least the Applicant's independent claim 1. More specifically, the Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Mercier for a method, apparatus and systems for performing a trick mode on a video signal containing a plurality of progressively scanned original pictures including selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal such as a pause or freeze command or a slow motion command. That is, Mercier absolutely fails to teach, suggest or anticipate "in response to a trick mode command, selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" as taught in the Applicant's Specification and claimed in at least the Applicant's independent claim 1.

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Instead, Mercier teaches an apparatus and method for storing and playing high definition content. In Mercier, the invention provides a mechanism for storing and playing back high definition content on a medium such as DVD optical disc. (See Mercier, Abstract). The Examiner alleges that in column 10, lines 25-28, Mercier anticipates the limitation of repeating original pictures to form a trick mode as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1. The Applicant disagrees. In support of the invention and as pointed out by the Examiner, in column 10 Mercier specifically recites:

> "Trick modes may be achieved by extracting MPEG-2 video elementary frames using search algorithms. The frames may be converted to a valid MPEG-2 video elementary stream by adjusting headers, like the temporal reference fields of picture headers and by inserting empty P frames or empty B frames. An empty frame has null motion vectors, no residual data coded (coded block pattern is 0) and has the property of repeating the content of one of the reference frames." (See Mercier, col. 5, lines 21-42). (emphasis added).

As evident from at least the portions of the disclosure of Mercier presented above, Mercier teaches that trick modes are achieved by extracting MPEG-2 video elementary frames. This is, the teachings of Mercier are in direct contrast to the invention of the Applicant at least with respect to independent claim 1, which specifically teaches and claims "in response to a trick mode command, selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal". Mercier further teaches that the remaining frames in the video stream can be converted to a valid MPEG-2 video elementary stream by inserting empty P frames or B frames to fill-in the missing spaces to generate a valid number of frames per second and not to form the trick mode video signal. That is, in Mercier a trick mode video signal is formed by extracting MPEG-2 video elementary frames (i.e., for fast motion) and not by "selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" (i.e., for slow motion) as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1.

As such and at least because the teachings of Mercier fail to teach, suggest or anticipate at least a method, apparatus and systems for performing a trick mode on a video signal containing a plurality of progressively scanned original pictures

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including "in response to a trick mode command, selectively repeating at least one of the original pictures to convert the video signal to a trick mode video signal" as taught in the Applicant's Specification and claimed in at least the Applicant's independent claim 1, the Applicant respectfully submits that the teachings and disclosure of Mercier do not anticipate the Applicant's invention, at least with respect to claim 1. That is, Mercier fails to disclose each and every element of the claimed invention, arranged as in the Applicant's claim 1 as required for anticipation.

Therefore, the Applicant submits that for at least the reasons recited above independent claim 1 is not anticipated by the teachings of Mercier and, as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Likewise, independent claims 10, 17 and 26 recite similar relevant features as recited in the Applicant's independent claim 1. As such, the Applicant submits that for at least the reasons recited above independent claims 10, 17 and 26 are also not anticipated by the teachings of Mercier and also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

Furthermore, dependent claims 3-4, 6-9, 19-20 and 22-25 depend either directly or indirectly from independent claims 1, 10 and 17 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 3-4, 6-9, 19-20 and 22-25 are also not anticipated by the teachings of Mercier. Therefore the Applicant submits that dependent claims 3-4, 6-9, 19-20 and 22-25 also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

Claim 11

The Applicant respectfully submits that the Mercier reference fails to teach, suggest or anticipate each and every element of at least the invention as recited in the Applicant's claim 11, which specifically recites:

> "A method of performing a trick mode on a video signal containing a plurality of progressively scanned original pictures, comprising the steps of:
> receiving a trick mode command; and
> **selectively inserting at least one dummy predictive picture in the video signal to form a trick mode video signal**" (emphasis added).

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The Applicant's invention is directed at least in part to a method of performing a trick mode on a video signal containing a plurality of progressively scanned original pictures including at least selectively inserting at least one dummy predictive picture in the video signal to form a trick mode video signal. More specifically, in support of at least claim 1, the Applicant in the Specification specifically recites:

> "The present invention also concerns a method of performing a trick mode on a video signal containing a plurality of progressively scanned original pictures, which includes the steps of: receiving a trick mode command; and selectively inserting at least one dummy predictive picture in the video signal to form a trick mode video signal." (See Applicant's Specification, page 4, lines 1-5).

And

> "If the original pictures are not to be repeated (or resent), then the flowchart 200 can continue at step 216 where one or more dummy P pictures can be selectively inserted in the video signal to form a trick mode video signal. In one arrangement, the insertion of the dummy P pictures can form a slow motion trick mode video signal. In addition, if original pictures are repeated in accordance with step 214, then one or more dummy P pictures can also be selectively inserted into the trick mode video signal containing the repeated original pictures. Thus, the trick mode video signal can contain repeated original pictures, dummy P pictures or a combination thereof." (See Applicant's Specification, page 10, lines 14-22).

It is clear from at least the portions of the Applicant's disclosure presented above that the Applicant's invention is directed, at least in part, to a method, apparatus and systems for performing a trick mode on a video signal containing a plurality of progressively scanned original pictures including selectively inserting at least one dummy predictive picture in the video signal to form a trick mode video signal such as a pause or freeze command or a slow motion command. That is, in the invention of the Applicant, at least with respect to claim 11, a trick mode video signal is formed by inserting at least one dummy predictive picture in the video signal.

The Applicant respectfully submits that Mercier fails to teach, suggest, disclose or anticipate each and every element of the claimed invention, arranged as in at least the Applicant's claim 11. More specifically, the Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Mercier for a method, apparatus and systems for performing a trick mode on a video signal

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containing a plurality of progressively scanned original pictures including selectively inserting at least one dummy predictive picture in the video signal to form a trick mode video signal such as a pause or freeze command or a slow motion command. That is, Mercier absolutely fails to teach, suggest or anticipate **"selectively inserting at least one dummy predictive picture in the video signal to form a trick mode video signal"** as taught in the Applicant's Specification and claimed in at least the Applicant's independent claim 11.

As previously described, instead, Mercier teaches an apparatus and method for storing and playing high definition content. In Mercier, the invention provides a mechanism for storing and playing back high definition content on a medium such as DVD optical disc. (See Mercier, Abstract). The Examiner alleges that Mercier anticipates the limitation of inserting at least one dummy predictive picture in the video signal to form a trick mode video signal as taught in the Applicant's Specification and claimed by at least the Applicant's claim 11. The Applicant disagrees. In support of the invention and as pointed out by the Examiner, Mercier specifically recites:

> "Trick modes may be achieved by extracting MPEG-2 video elementary frames using search algorithms. The frames may be converted to a valid MPEG-2 video elementary stream by adjusting headers, like the temporal reference fields of picture headers and by inserting empty P frames or empty B frames. An empty frame has null motion vectors, no residual data coded (coded block pattern is 0) and has the property of repeating the content of one of the reference frames." (See Mercier, col. 5, lines 21-42). (emphasis added).

Again, as evident from at least the portions of the disclosure of Mercier presented above, Mercier teaches that trick modes are achieved by extracting MPEG-2 video elementary frames. This is, the teachings of Mercier are in direct contrast to the invention of the Applicant at least with respect to independent claim 11, which specifically teaches and claims "selectively inserting at least one dummy predictive picture in the video signal to form a trick mode video signal". Mercier further teaches that the remaining frames in the video stream can be converted to a valid MPEG-2 video elementary stream by inserting empty P frames or B frames to fill-in the missing spaces to generate a valid number of frames per second and not to form the trick mode video signal. That is, in Mercier a trick mode video

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signal is formed by extracting MPEG-2 video elementary frames (i.e., for fast motion) and not by "selectively inserting at least one dummy predictive picture in the video signal to form a trick mode video signal" (i.e., for slow motion) as taught in the Applicant's Specification and claimed by at least the Applicant's claim 11.

As such and at least because the teachings of Mercier fail to teach, suggest or anticipate at least a method, apparatus and systems for performing a trick mode on a video signal containing a plurality of progressively scanned original pictures including "selectively inserting at least one dummy predictive picture in the video signal to form a trick mode video signal" as taught in the Applicant's Specification and claimed in at least the Applicant's independent claim 11, the Applicant respectfully submits that the teachings and disclosure of Mercier do not anticipate the Applicant's invention, at least with respect to claim 11. That is, Mercier fails to disclose each and every element of the claimed invention, arranged as in the Applicant's claim 11 as required for anticipation.

Therefore, the Applicant submits that for at least the reasons recited above independent claim 11 is not anticipated by the teachings of Mercier and, as such, fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Likewise, independent claim 27 recites similar relevant features as recited in the Applicant's independent claim 1. As such, the Applicant submits that for at least the reasons recited above independent claim 27 is also not anticipated by the teachings of Mercier and also fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Furthermore, dependent claims 12-13, 15, 28-29 and 31 depend either directly or indirectly from independent claims 11 and 27 and recite additional features therefor. As such and for at least the reasons set forth herein, the Applicant submits that dependent claims 12-13, 15, 28-29 and 31 are also not anticipated by the teachings of Mercier. Therefore the Applicant submits that dependent claims 12-13, 15, 28-29 and 31 also fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

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Claims 16 and 32

The Examiner rejected claims 16 and 32 under 35 U.S.C. § 102(e) as being anticipated by Mercier (U.S. Patent 6,865,747).

The Applicant has herein cancelled claims 16 and 32 to place this application in condition for allowance and not in response to the prior art.

Conclusion

The Applicant respectfully submits that none of the claims, presently in the application, are subject to rejection under the Judicially created, non-statutory Double Patenting doctrine. Furthermore, the Applicant submits that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.
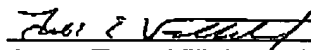
If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,

SHU LIN

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